

REMARKS/ARGUMENTS

Claims 1-3, 5-16 and 19-21 stand rejected in the outstanding Official Action. Claims 1, 11 and 19 have been amended and newly written claim 24 offered for consideration. Accordingly, claims 1-3, 5-16, 9-21 and 24 are the only claims remaining in this application.

On page 2, section 2 of the Official Action, the Examiner points out that there is insufficient antecedent basis for the limitation “said source” in claim 11, line 11. Applicants have amended claim 11 to recite “said radiation means” which does have clear antecedent basis. The Examiner’s pointing out this possible defect with the claim is very much appreciated.

In section 4 on page 2 of the Official Action, the Examiner rejects claims 1, 2, 5-7, 11, 13-16 and 19-21 under 35 USC §103 as being unpatentable over Devie (U.S. Publication 2003/0112426). In order to support a rejection under §103, the burden is on the Examiner to establish not only that all claimed elements are disclosed somewhere in the cited reference, but that there is also some reason or rationale for combining those separate elements in the manner set out in Applicants’ claims. As will be seen, the claimed elements are not disclosed in the Devie reference and there is no rationale provided for combining those elements.

Applicants’ independent claim 1 specifies “at least one wavefront shaping means” in “means-plus-function” format (and method claim 19 specifies the corresponding “shaping” step in “step-plus-function” format). In evaluating means-plus-function and step-plus-function format claims, the Examiner must follow the dictates of 35 USC §112 (6th paragraph), i.e., he must construe the clause to cover the corresponding structure (and method steps) disclosed in Applicants’ specification and structural (and step) equivalents thereof.

Applicants’ specification discloses that the wavefront shaping means is a “lens of known properties (10)” as shown in Figure 2 and discussed on page 11, lines 28 and 29, the “polarizer

13" disclosed in Figure 3 and discussed on page 12, line 16, the "lens of known properties (17)" disclosed in Figure 4 and discussed on page 12, line 24, and the "spatial light modulator (19)" shown in Figures 5 and 6 and discussed on page 14. There are corresponding disclosures of the "shaping" step and its functions.

All of the above structural components (and method steps) disclosed in Applicants' specification and their structural (step) equivalents are covered by the claim language and the language is limited to these structures (and steps) and their equivalents. These structures have the function of pre-shaping a wavefront that is incident on the object under test so as to compensate for any non-planarity of the beam transmitted by or reflected from the object. The pre-shaping is such that it compensates for any "non-planarity introduced by said object having said specified shape." As a result of the wavefront shaping means, if the object has the specified shape, then the wavefront of the beam transmitted or reflected from the object will be planar. Accordingly, if the object does not have the specified shape (i.e., it is a "departure" from the specified shape), then the wavefront of the "final beam" will not be planar and the non-planarity of this "final beam" will indicate the "departure of a shape of an object from a specified shape" as claimed. This is described in detail on pages 4 and 5 of Applicants' specification.

The Examiner fails to identify any structure in Devie which falls within the scope of the claimed "at least one wavefront shaping means." There is no evidence in the Official Action that the Examiner has even properly construed this means-plus-function limitation. Assuming that the Examiner did correctly construe the claim term, he merely alleges that item "42" is impliedly the claimed wavefront shaping means in the Devie reference.

Devie on page 4, paragraph 65 (as cited by the Examiner) teaches that item 42 is a "lens 42." As clearly be seen, lens 42 is a collimating lens which converts a divergent beam of light

from point source 40 to a collimated beam of light as shown in Devie's Figure 3. Quite clearly, a collimating lens, while it might be considered a generic wavefront shaper, is not Applicants' claimed "wavefront shaping means . . . for shaping the final beam to have a substantially planar wavefront when said object has said specified shape."

Should the Examiner believe otherwise, he is respectfully requested to identify any specific structure in the Devie reference which the Examiner concludes meets the limitation of Applicants' claimed wavefront shaping means "for shaping the final beam to have a substantially planar wavefront when said object has said specified shape."

The Examiner's failure to properly construe the subject matter of Applicants' independent claims was the basis for a previous appeal and is presumably the reason why the Pre-Appeal Panel ordered the re-opening of prosecution in this case. The fact that the Examiner has changed from the Kuchel reference in the earlier Official Actions to the Devie reference in the current Official Action does not change the fact that the Examiner has not first properly construed Applicants' claim language and secondly has failed to identify where in the cited prior art Applicants' claimed "wavefront shaping means" structure appears.

Should the Examiner be unable to identify where the Devie reference contains a teaching that meets the "wavefront shaping means" as set out in independent claims 1 and 19, he is respectfully requested to withdraw the rejection of claims 1, 2, 5-7, 11, 13-16 and 19-21 under the provisions of 35 USC §103 as being unpatentable over Devie.

Claims 3 and 10 stand rejected under 35 USC §103 as unpatentable over Devie in view of Kuchel. Inasmuch as claims 3 and 10 ultimately depend from claim 1, the above comments distinguishing claim 1 from the Devie reference are herein incorporated by reference. It is also noted that the Kuchel reference has been previously cited and Applicants' previous arguments

distinguishing claim 1 and all claims dependent thereon from the Kuchel reference are herein incorporated by reference.

Suffice it to say that the Examiner does not now allege that Kuchel teaches the claimed “wavefront shaping means” and therefore, even if Devie and Kuchel were combined, there is still no disclosure of this claimed feature or the interrelationship between this feature and other features in Applicants’ independent claims or claims dependent thereon. Therefore, any further rejection of claims 3 and 10 under 35 USC §103 as being unpatentable over Devie in view of Kuchel is respectfully traversed.

Claims 8 and 9 stand rejected under 35 USC §103 as unpatentable over Devie in view of Burge (U.S. Patent 5,737,079). Inasmuch as claims 8 and 9 ultimately depend from claim 1, the above comments distinguishing claim 1 from the Devie reference are herein incorporated by reference. The Examiner does not allege that Burge teaches the claimed “wavefront shaping means” and therefore even if Devie and Burge were combined, there’s still no disclosure of this claimed feature or the interrelationship between this feature and other features in Applicants’ independent claims or claims dependent thereon.

Therefore, any further rejection of claims 8 and 9 under 35 USC §103 as being unpatentable over Devie in view of Burge is respectfully traversed.

Claim 12 stands rejected under 35 USC §103 as unpatentable over Devie in view of Almogy (U.S. Publication 2003/0058433). Inasmuch as claim 12 ultimately depends from claim 1, the above comments distinguishing claim 1 from the Devie reference are herein incorporated by reference. The Examiner does not allege that Almogy teaches the claimed “wavefront shaping means” and therefore, even if Devie and Almogy were combined, there is

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still no disclosure of this claimed feature or the claimed interrelationship between this feature and other features in Applicants' independent claims or claims dependent thereon.

Therefore, any further rejection of claim 12 under 35 USC §103 as being unpatentable over Devie in view of Almogy is respectfully traversed.

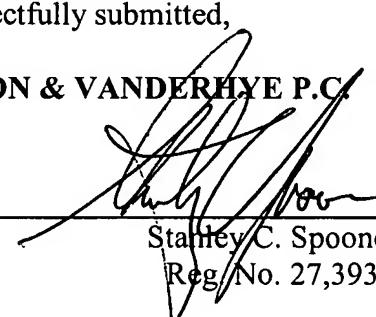
Applicants have also drafted newly written claim 24 and requests that this new independent claim be considered as patentable.

Having responded to all objections and rejections set forth in the outstanding Official Action, it is submitted that claims 1-3, 5-16, 19-21 and 24 are all in condition for allowance and notice to that effect is respectfully solicited. In the event the Examiner is of the opinion that a brief telephone or personal interview will facilitate allowance of one or more of the above claims, he is respectfully requested to contact applicant's undersigned representative.

Respectfully submitted,

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